

CLAIMS

1. A composition to be used in a process for electroplating surfaces with tin, said composition comprising the following components (g/l):

- Tin (in a form of tin sulfamate) 50-90
- 5 - Sulfamic acid, free 40-100
- Sulfates, in a form of SO_4^{2-} 0-15
- Nitrogen-bearing block copolymer
of propylene oxide and ethylene oxide 1-6

10 said copolymer having molecular weight of 3950 to 6450 and "number of ethylene oxide links-to-number of propylene oxide links" ratio of 1.4-1.2:1.0 at initial buildup of required number of links from propylene oxide followed by oxyethylation.

2. Composition according to claim 1 having a pH of 0.6 to 1.1.

15 3. Method for electrotinning a surface in form of a steel strip or plate characterized in that a tinning composition according to claims 1 or 2 is used.

4. Method according to claim 3 performed in continuous electrotinning lines with strip conveying speed of 2 to 11 m/s.

5. Method according to claim 3 performed at temperatures of 20 to 70°C.

6. Method according to claim 3 performed at current densities of 5 to 70 A/dm².

20 7. Method according to claim 3 in which the strip or plate is subjected to a pre-treatment of degreasing and pickling.

8. Method according to claim 3 in which the strip or plated is subjected to a post-treatment of reflowing, passivation and oiling of tin coating.

25 9. Strip or plate electrotinned according to the method of claim 3 with a tin coating weight of 3.65 g/m², said strip or plate being characterized by a relative porosity of about 0.06%.